

ABSTRACT OF THE DISCLOSURE

In a method for manufacturing a crystalline silicon film by utilizing a metal element that accelerates the crystallization of silicon, an adverse influence of this metal element can be suppressed. A semiconductor device manufacturing method is comprised of the steps of: forming an amorphous silicon film on a substrate having an insulating surface; patterning the amorphous silicon film to form a predetermined pattern; holding a metal element that accelerates the crystallization of silicon in such a manner that the metal element is brought into contact with the amorphous silicon film; performing a heating process to crystalize the amorphous silicon film, thereby being converted into a crystalline silicon film; and etching a peripheral portion of the pattern of the crystalline silicon film.